

### ABSTRACT OF THE DISCLOSURE

The invention relates to a method for marking and identifying solid, liquid and gaseous substances (S1-n). In order to carry out said marking, at least one nucleic acid sequence is selected from a first group of predefined nucleic acid sequences (N1-n) respectively possessing an identification sequence section (IDS1-n) and is added to the substance (S1-n). In order to carry out identification, a second group of other nucleic acid sequences (N'1-n) is provided, whereby said nucleic acid sequences respectively possess a detection sequence section (IDP1-n) which is complementary to one of the identification sequence sections (IDS1-n). First melting points of the hybrids which are formed from the identification sequences (IDS1-n) with the complementary detection sequence sections (IDP1-n) differ by a maximum of 5°C and second melting points of hybrids which are not fully complementary formed from the identification sequence sections (IDS1-n) and detection sequences (IDP1-n), are lower by more than 5°C than the lowest first melting point. For identification purposes, the nucleic acid sequences selected from the first group (N1-n) are brought into contact with the other nucleic acid sequences (N'1-n) from the second group in predefined hybridization conditions and said hybridization is detected.